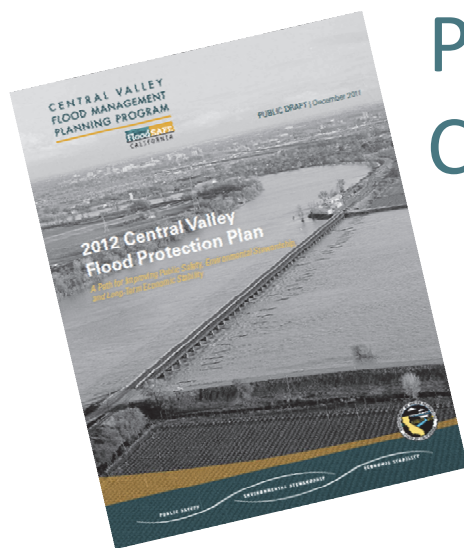


Public Draft 2012 Central Valley Flood Protection Plan



Presentation to the Central Valley Flood Protection Board

January 27, 2012

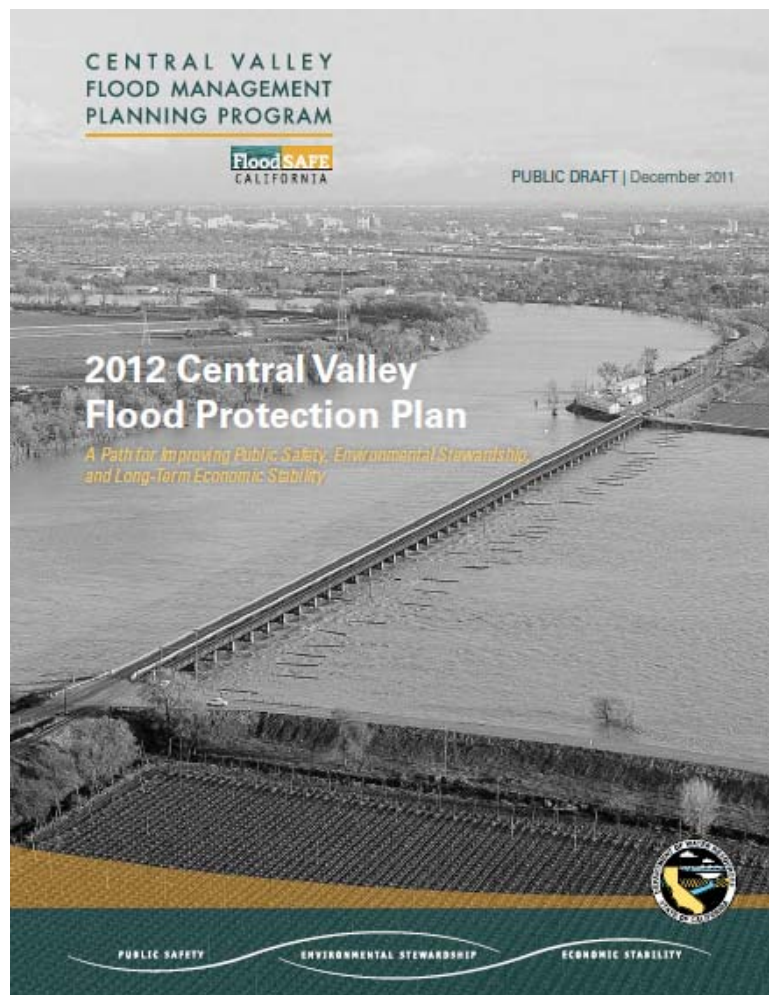
California Department of Water Resources

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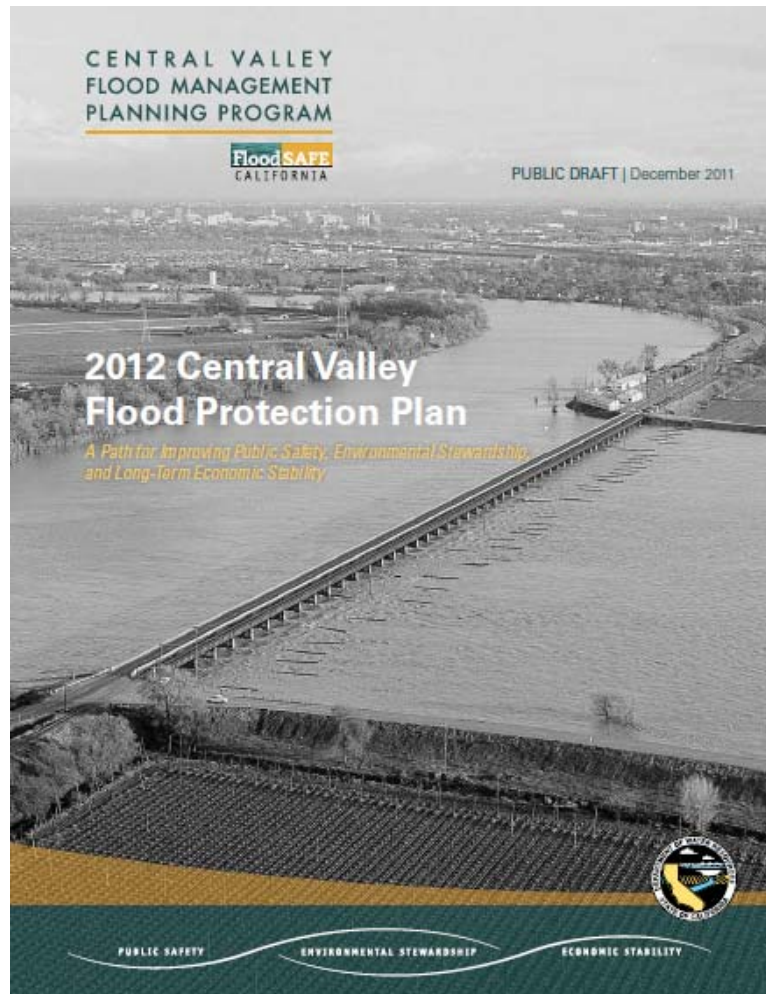
ENVIRONMENTAL STEWARDSHIP

ECONOMIC STABILITY

Welcome and Greetings



Introduction to the CVFPP



*The 2012 CVFPP reflects the State's **systemwide investment approach** for flood management improvements in the Central Valley*

Today's Presentation

- Need for the CVFPP (video slideshow)
- Scope and Development of the CVFPP
- The Solution: State Systemwide Investment Approach
- *Board Questions*
- CVFPP Implementation
- Implementation Challenges
- Next Steps
- *Board Questions*
- Closing Comments

Need for the CVFPP (FloodSAFE Video Slideshow)

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Scope and Development of the CVFPP

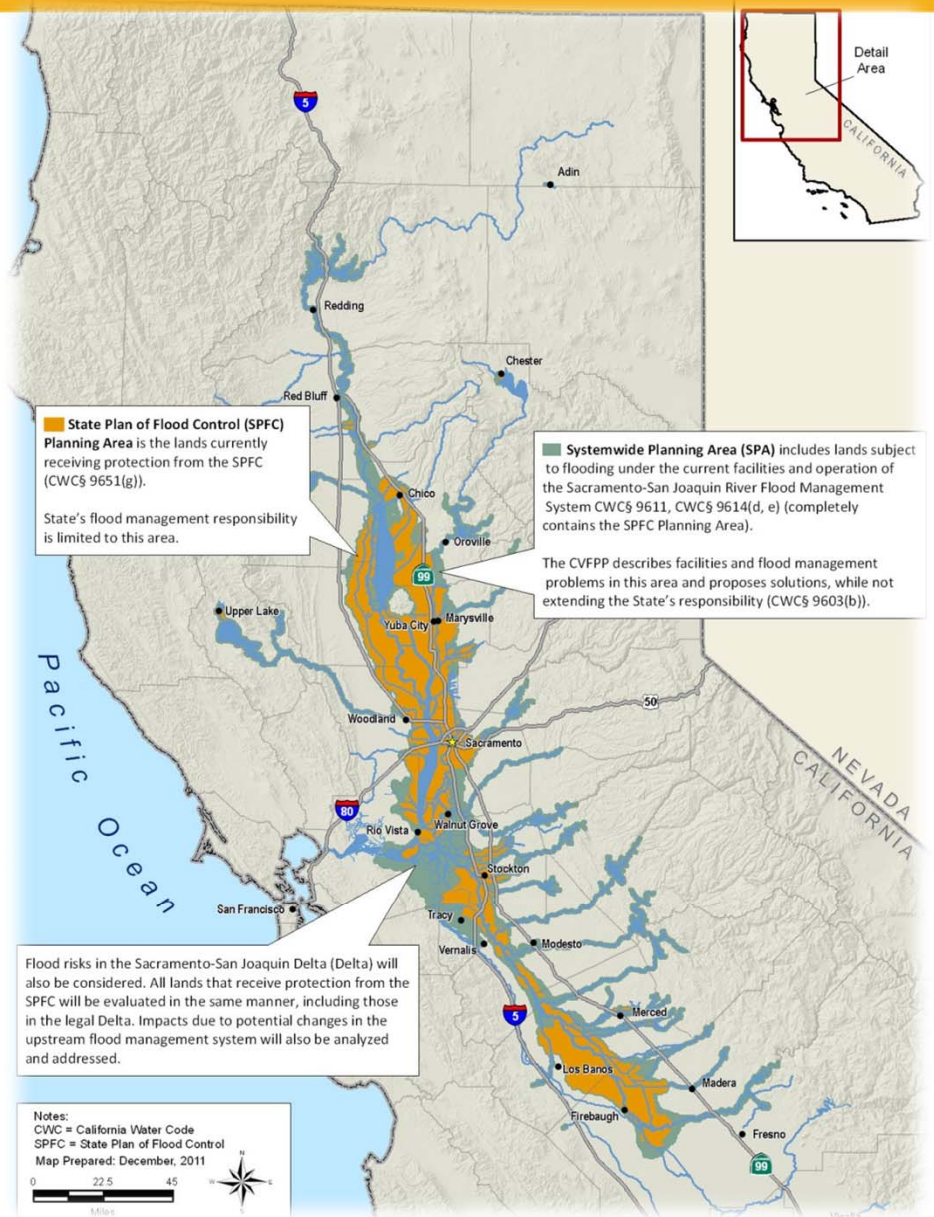
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Geographic Scope

- Focuses on lands protected by facilities of the State Plan of Flood Control of Flood Control
- Addresses major flood management reservoirs and local facilities that effect the operation of the SPFC
- Coordinates with other major flood management efforts and related resources



Level of Detail

*High-Level
Vision*

Reconnaissance

Feasibility

Project-Specific

*On-the-
Ground
Projects*

- The 2012 CVFPP is a descriptive document
- It is supported by data and analyses conducted at a reconnaissance level
- Follow-on feasibility studies, environmental reviews, and designs will be needed to implement on-the-ground projects consistent with the 2012 CVFPP

Systemwide Perspective

- Considers the Central Valley flood system as a whole
- Focuses on State Plan of Flood Control
- Recognizes State's fundamental interests
 - Public safety
 - Environmental stewardship
 - Economic stability



Reservoir Storage Operations



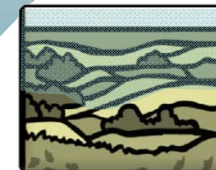
Protection for Rural-Agricultural Areas and Small Communities



Ecosystem Functions within Flood System



Conveyance of Flood Flows



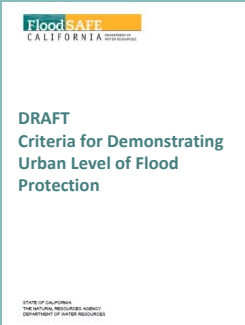
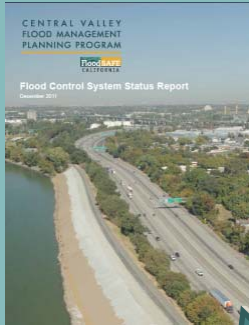
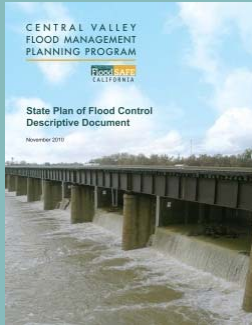
Management of Floodplains



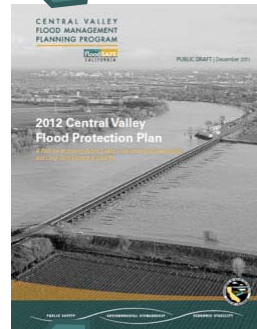
Protection for Urban Areas

2012 CVFPP Organization

Documents Incorporated by Reference



2012 Central Valley Flood Protection Plan



2012 CVFPP Program Environmental Impact Report (Public Draft - March)

Supporting Data, Analyses, Findings, and Technical Studies

CVFPP
Attachment 1
Legislative
Reference

CVFPP
Attachment 2
Conservation
Framework

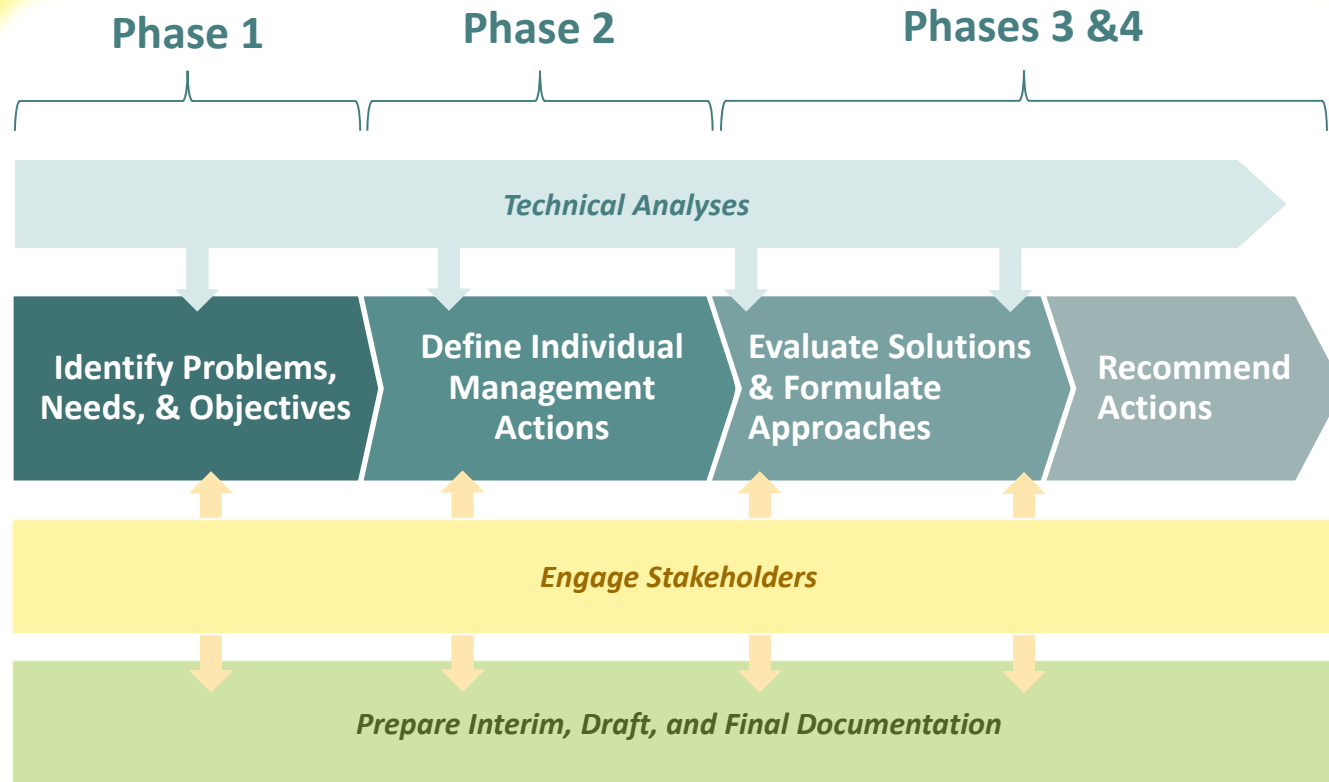
CVFPP
Attachment 3
Documents
Incorporated by
Reference

...

*The CVFPP and its companion documents collectively meet legislative requirements contained in the **Central Valley Flood Protection Act of 2008***

Planning Process

Adaptive
Process for
2012 CVFPP
Development



Systemwide Perspective

CVFPP Goals

- **Primary Goal: Improve Flood Risk Management**
- **Supporting Goals:**
 - Improve Operations and Maintenance
 - Promote Ecosystem Functions
 - Improve Institutional Support
 - Promote Multi-Benefit Projects

Preliminary Approaches



Achieve SPFC Design Flow Capacity

Address flow capacity and other conditions for existing SPFC facilities. No major changes to footprint or operation of SPFC facilities



Protect High Risk Communities

Focus on protecting life safety for populations at highest risk, including urban areas and small communities



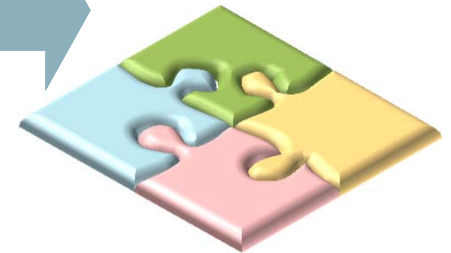
Enhance Flood System Capacity

Seek opportunities to achieve multiple benefits through enhancing flood system storage and conveyance capacity

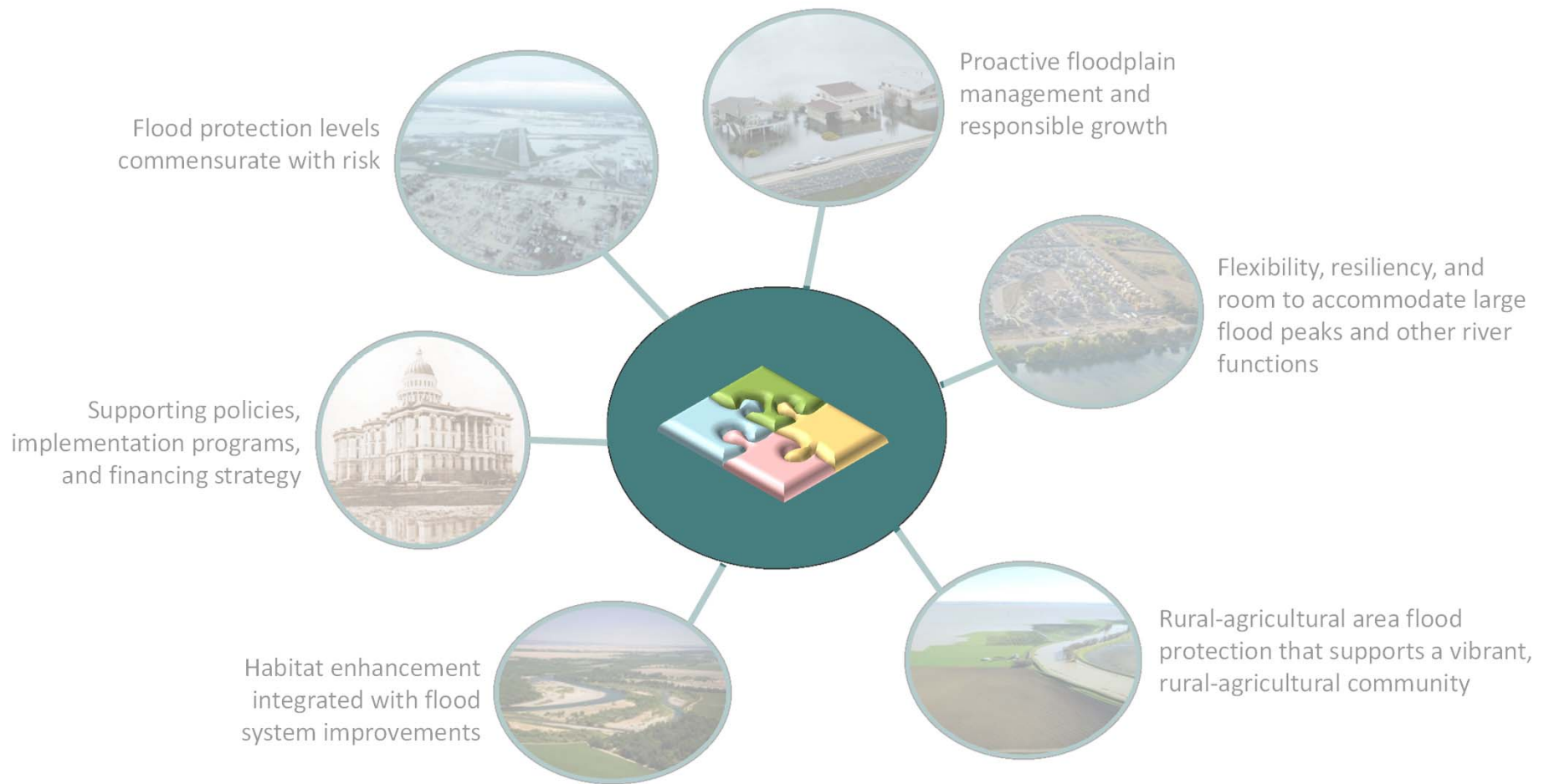


Policies/Flood Management Strategies Development, Implementation Guidance

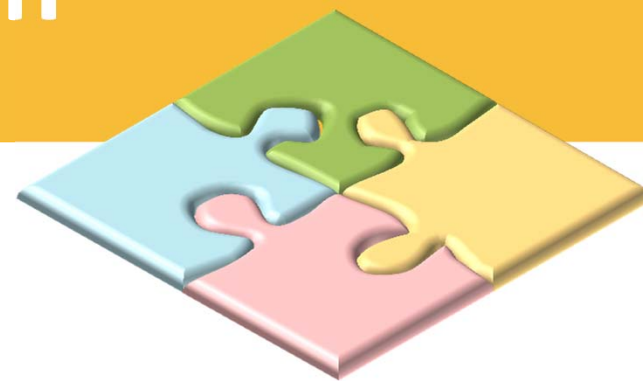
State Systemwide Investment Approach



Key Implications for CVFPP



The Solution: State Systemwide Investment Approach



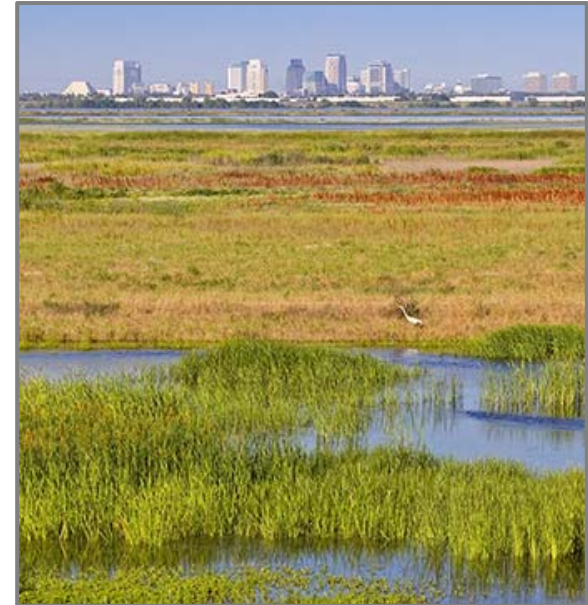
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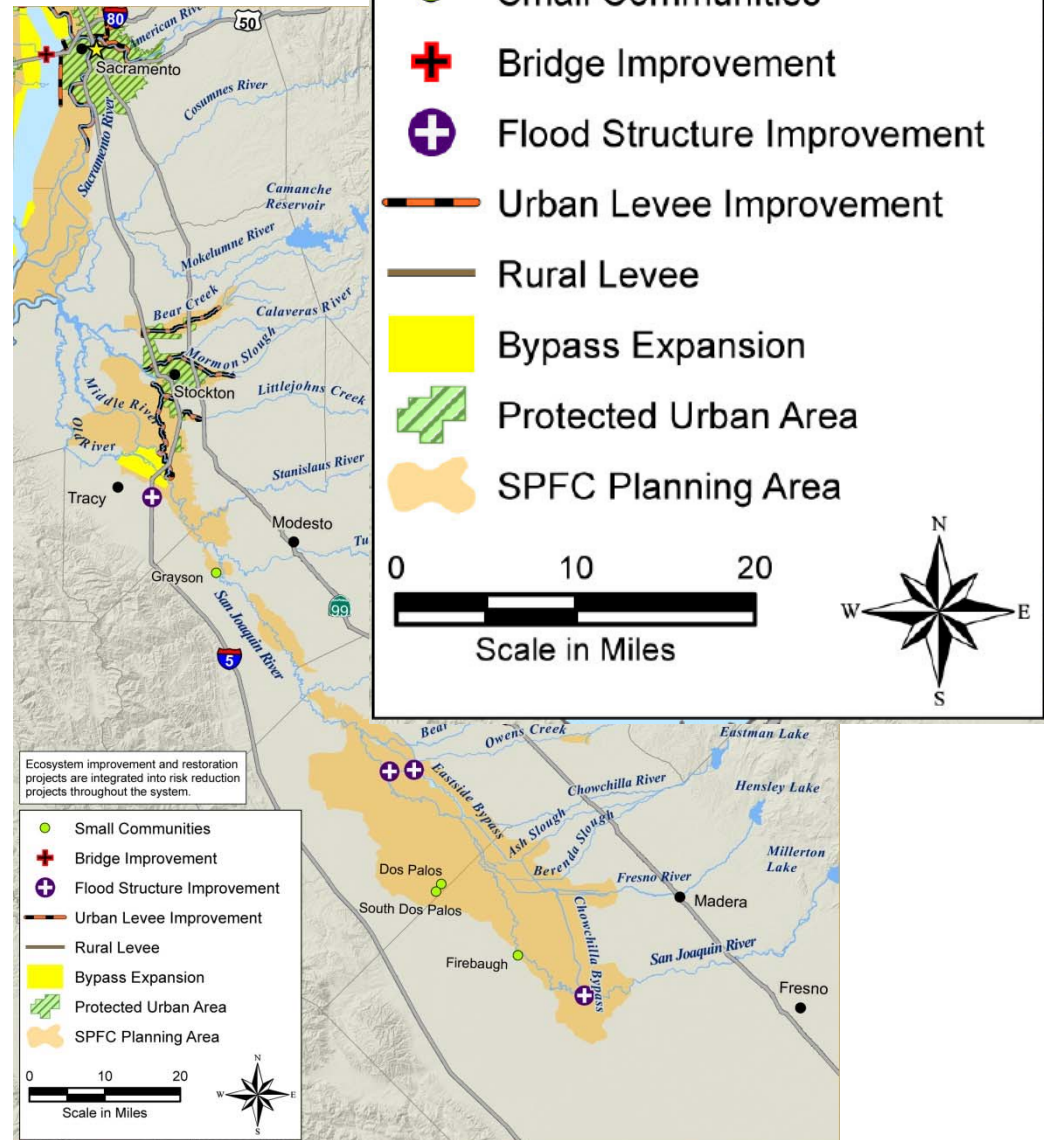
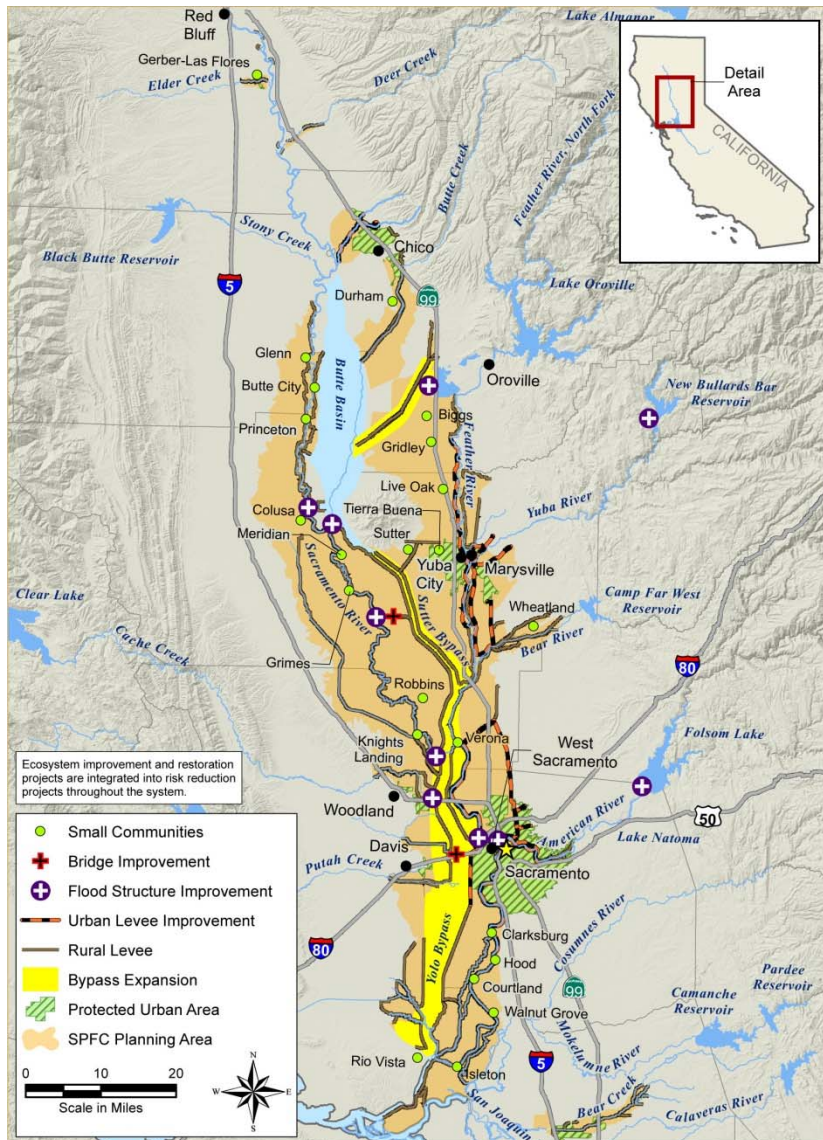
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State Systemwide Investment Approach

- Incorporates aspects of each of the preliminary approaches
- Physical elements
 - **Regional Improvements**
 - Urban
 - Small Community
 - Rural-Agricultural
 - **System Improvements**
- Ecosystem restoration opportunities integrated
- Policies, guidance, and implementation strategies



Physical Features of the SSIA



SSIA System Improvements

- Have the potential to provide benefits to large portions of the system, and improve overall SPFC performance and resiliency
- Provide significant opportunities to improve ecosystem functions and continuity
- Provide flexibility to adapt to climate change



SSIA Benefits

- Overall reduction in expected annual flood damages of about two thirds
- Improved public health and safety
- Benefits to local and regional economies
- Ecosystem restoration
- Enhanced agricultural sustainability

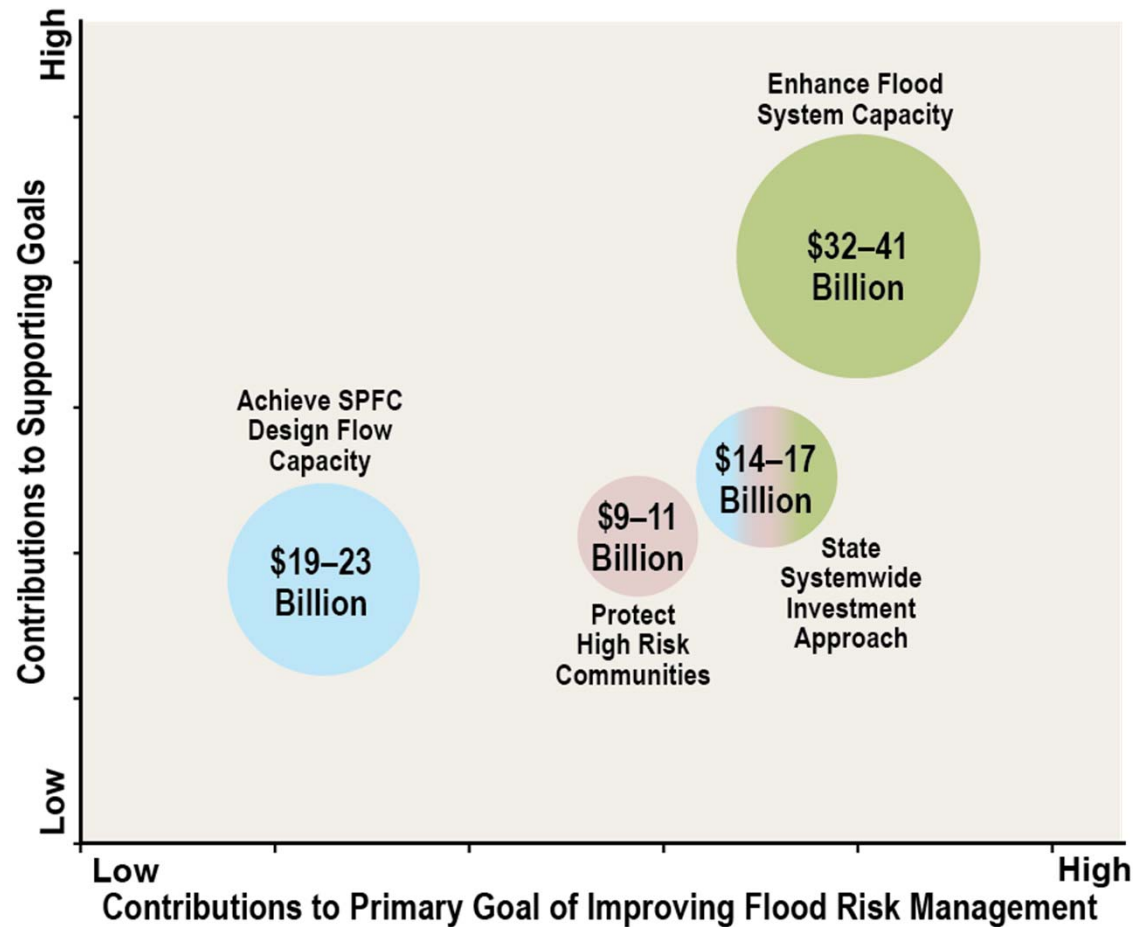


1955 Flood



Riparian brush rabbit

Relative Cost and Performance



KEY: SPFC = State Plan of Flood Control

Board Questions

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CVFPP Implementation

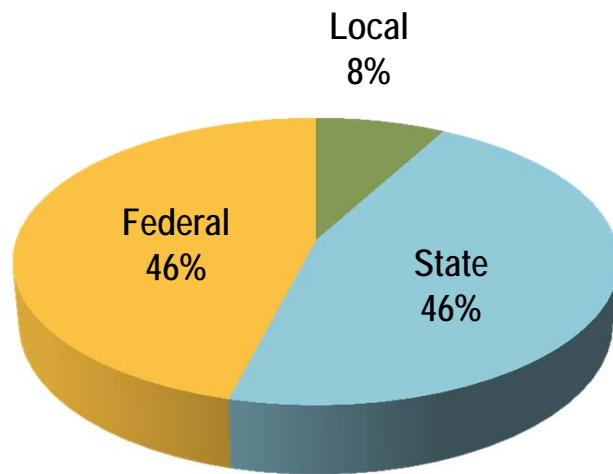
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Estimated Implementation Costs

Total Cost:
\$14 - \$17 Billion



Potential Cost Sharing

- Potential State, local, and federal shares will vary by project type
- Actual costs will likely be higher due to future price increases & long implementation timeframe
- Specific costs will change based on future regional planning and system feasibility studies

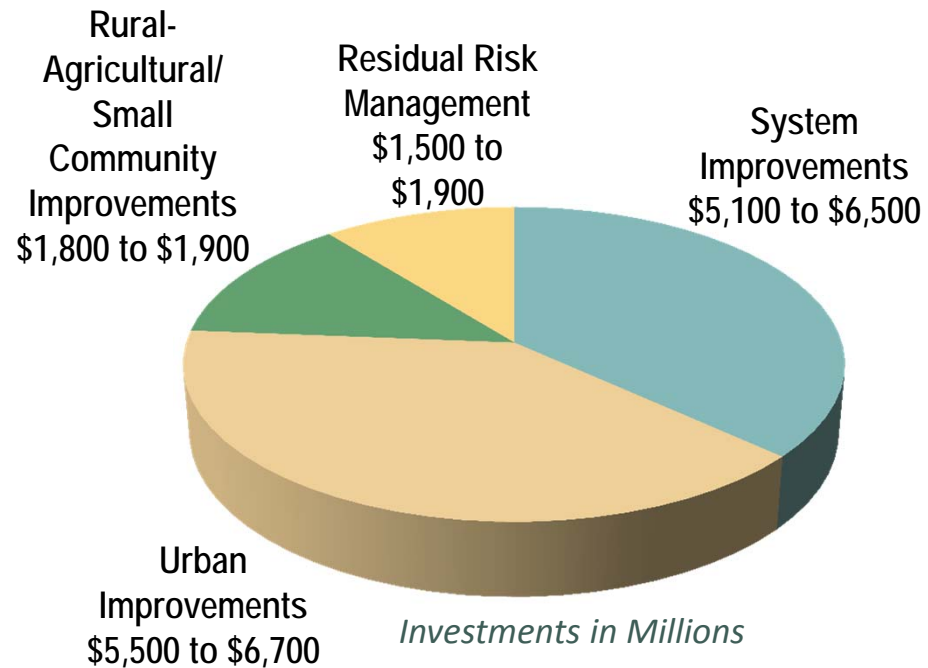
SSIA: Estimated Range of Investments

(\$ millions)

Flood Management Programs		Total	
		Low	High
2007 – 2011	State	\$1,632	
	Federal ¹	\$780	
	Local ¹	\$490	
	Subtotal	\$2,902	
2012 – 2017	State	\$1,500	To \$1,730
	Federal	\$1,500	To \$1,740
	Local	\$190	To \$290
	Subtotal	\$3,210	To \$3,770
2018 and Beyond	State	\$3,270	To \$4,340
	Federal	\$4,150	To \$5,370
	Local	\$410	To \$530
	Subtotal	\$7,830	To \$10,240
Total	State	\$6,400	To \$7,700
	Federal	\$6,430	to \$7,890
	Local	\$1,090	to \$1,310
	Subtotal	\$13,920	to \$16,910

¹ Federal and local project cost-shares for 2007 – 2011 were estimated.

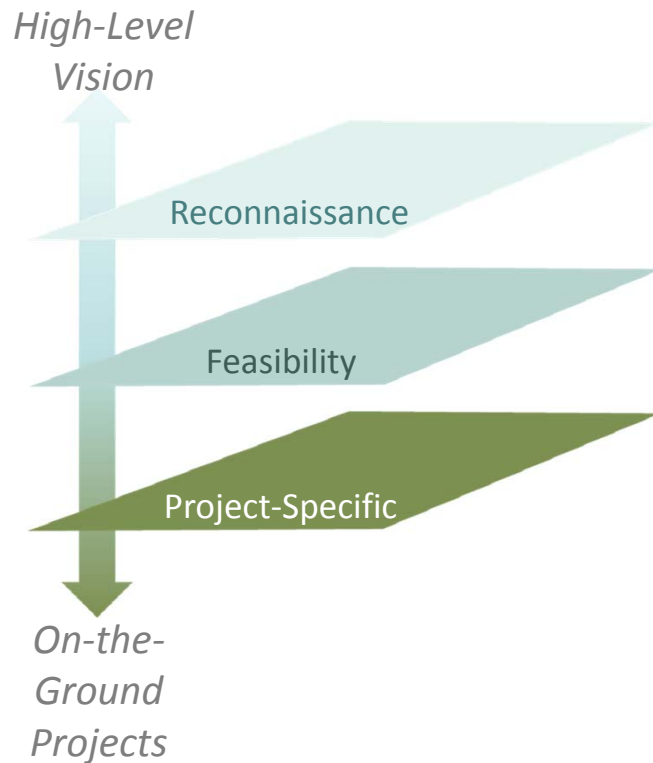
Overall SSIA Investment Types



Four Types of Investments:

- ✓ System Improvements
- ✓ Urban Improvements
- ✓ Rural-Agricultural / Small Community Improvements
- ✓ Residual Risk Management

System Feasibility Studies



- DWR will work with local agencies in nine regions to develop regional plans
- DWR will prepare two basin-wide feasibility studies to define State interest in system improvements
- Continue implementing ongoing flood management programs

Conservation Integral to Flood Management

- Legislative direction - CVFP Act
 - Promote natural hydrologic and geomorphic processes
 - Increase and improve habitat
 - Promote species recovery
- DWR committed to environmental stewardship
 - Environmental Stewardship Policy
 - FloodSAFE goal
 - CVFPP supporting goal
- Broadens support for flood improvements

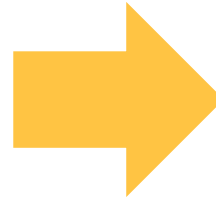
Conservation Integral to the SSIA

Integrated habitat and flood system projects:

- Multiple benefit projects
- Using vegetation to solve problems
- Integrated habitat improvements
 - Shaded riverine aquatic habitat
 - Habitat connectivity
 - Fish passage
 - Reduce invasive species



Conservation Framework and Strategy



Conservation Framework Highlights

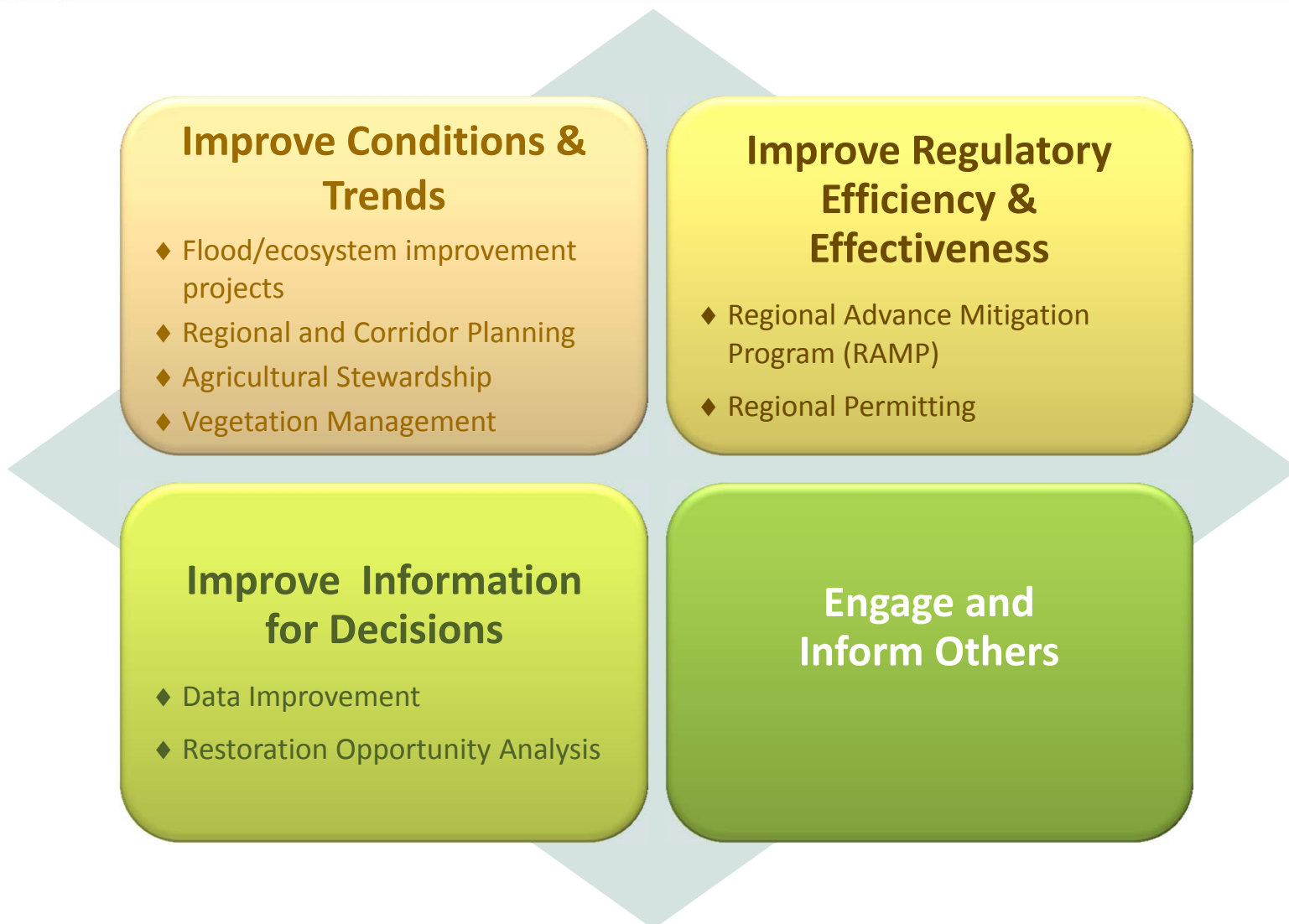
Provides information about:

- Ecosystem conditions and trends
- Conservation-specific goals
- Integrated flood & ecosystem mgmt examples
- Multi-benefit opportunities
- Vegetation management approach
- Implementation activities



Bear River Levee Setback Project (TRLIA)

Implementing Conservation Framework



Levee Vegetation Management Strategy

- Risk informed and adaptive vegetation management
- Protects public safety
- Protects sensitive environmental resources
- Recognizes limited funding

Levee Vegetation Management Strategy

Adaptive Levee Vegetation Management
which is responsive to:

- Knowledge gained from levee performance during high water events
- The results of ongoing and future research



Levee Vegetation Management Strategy



New Levees

Managed to comply with the
USACE ETL



Levees with Legacy Vegetation

- Managed for **Visibility** for inspection and **Accessibility**
- Protect Waterside Vegetation
- Life Cycle Management

Implementation Challenges

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Summary

- **There is an urgent need**
 - Over one million people and \$69 billion at risk
- **The CVFPP provides a path forward**
 - It will be costly: \$14-17 Billion
 - It will take a long time to implement: 20+ years
 - We are already making progress: \$2Billion in early implementation investments
- **There is still work to do**
 - Public review and Board adoption process
 - Regional planning and financing strategy
 - State and USACE feasibility studies



Potential Implementation Challenges

- Land use
- Time, cost, and financing for implementation
- Federal fiscal support and jurisdictional issues
- Institutional barriers



Next Steps

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Support Needed from Board

- Adopt CVFPP as a reasonable and responsible approach to balance public safety and environmental stewardship
 - Provide guidance for 2017 CVFPP update that reinforces 2012 CVFPP direction
- Endorse strong encroachment enforcement, local maintaining agency reporting, and local O&M responsibilities
- Support consolidation of CV Flood Mgmt System governance under 9 regional areas
- Support bypass modifications and new bypasses

Support Needed from Board (cont.)

- Encourage responsible development, particularly in deep floodplains
- Support acquisition of agricultural easements
- Discourage federal policies that compromise public safety and environmental protection
- Support policies and programs that increase federal funding to flood system improvements
- Support flood assessments to flood protection beneficiaries
- Support multi-benefit projects

Board Questions

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Closing Comments

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